

KYMENLAAKSON AMMATTIKORKEAKOULU

University of Applied Sciences

Degree Programme in International Business

Elena Prokofyeva

MEASURING THE EFFECTIVENESS OF SEARCH ENGINE OPTIMIZATION
FOR CONTENT-BASED WEBSITES

Bachelor's Thesis 2016

ABSTRACT

KYMENLAAKSON AMMATTIKORKEAKOULU

University of Applied Sciences

Degree Programme in International Business

PROKOFYEVA, ELENA

Measuring the Effectiveness of Search Engine
Optimization for Content-Based Websites

Bachelor's Thesis

47 pages + 1 page of appendices

Supervisor

Ulla Puustelli, Senior Lecturer

Commissioned by

Company X

February 2016

Keywords

seo, digital marketing, on-page seo, off-page seo

This thesis studies search engine optimization in a relation to non-e-commerce websites with an objective to create a measurement strategy for assessing the search engine optimization performance for this kind of websites. The most appropriate on-page and off-page SEO techniques were discussed and methods to assess SEO performance were studied.

The data was collected during seven months of action research, conducted at the media Company X, for which the author of this thesis planned, implemented and analyzed a SEO campaign. A SEO implementation plan was created with the help of SMART analysis and statistical data was collected with Google Analytics.

The research shows how to align SEO key performance indicators with the overall business goal, and thus be able to properly assess the results and achieve the desired marketing and business results via SEO.

TABLE OF CONTENTS

ABSTRACT

1	INTRODUCTION	5
1.1	Research background	5
1.2	Research problem	5
1.3	Research objective and research question	6
1.4	Methodology	6
2	SEARCH ENGINE OPTIMIZATION IN MARKETING PERSPECTIVE	8
2.1	Concept of search engine optimization	8
2.1.1	The evolving nature of SEO	8
2.1.2	On-page optimization techniques	10
2.1.3	Off-page optimization techniques	13
2.1.4	Web-analytics	17
2.2	SEO as a part of marketing mix	21
2.2.1	Marketing mix in the digital environment	21
2.2.2	The role of SEO in marketing mix	22
2.2.3	ROI in SEO	22
3	METHODOLOGY	23
3.1	Research method	23
3.2	Data acquisition	25
3.3	SMART analysis	25
3.4	Validity of the research	27
3.5	Overall constraints and limitations	27
4	FINDINGS AND ANALYSIS	28
4.1	Setting SEO goals and frameworks for the Project XX	28
4.2	Collected data analysis	31
4.2.1	Baseline	32
4.2.2	Measuring results	34

4.2.3 Assessing the ROI for SEO campaigns	37
4.3 Recommendations for further research	39
5 CONCLUSION	42
SOURCES	44
Appendix 1	48

1 INTRODUCTION

1.1 Research background

Although some still perceive search engine optimization (or SEO) as a set of techniques, in recent years it has evolved into a comprehensive practice of website development and promotion. This practice is intended to increase website effectiveness by making it easy both for users and search engine robots to find the website and understand its content. Search engine optimization is one of the digital marketing tools.

With the evolution of search engines, the meaning of SEO has been changing from being a completely technical task to being a part of marketing strategy. Effective SEO campaign can no longer be conducted by only IT specialist: it requires both technical and marketing competencies, as it is very important that SEO activities are going in line with marketing strategy and serving the overall business goal. It is also crucial to remember about frameworks that are imposed by the field of business.

This work is concentrated on SEO for content-based websites. According to Saleh & Shukair (2011, p. 11), “content-based websites rely on publishing content to drive visitors to the site”. Content driven websites are usually implementing advertising or subscription business models or their blending option. Those types of websites are usually associated with web services, entertainment or publishing industry. According to Jobber and Ellis-Chadwick (2013, p.359), they are referred to the sector of creative services. This sector is involved in development services based on creative skills like writing, design, art etc. These “products” are mostly “aesthetic and/or symbolic-expressive, rather than utilitarian and functional”. Among them electronic publishing is in economic perspective one of the greatest part of this sector.

1.2 Research problem

The problem for this research is that there are still no measurement guidelines able to effectively assess SEO performance for content-based websites.

Most of case studies are analyzing SEO performance for e-commerce, for which the main measure of success is an increase in sales. However, when it comes to content-based websites that are selling nothing but providing content, measurement is not so obvious. Their profitability depends on the attractiveness for advertisers, and therefore it is not so easy to link SEO performance with the business benefits. The results of SEO campaigns usually do not appear instantly. Without the proper evaluation, search engine optimization process is already getting out of control, and both the SEO practitioner and company managers are losing their faith in the effectiveness of SEO. In order to take the maximum advantage out of SEO it is necessary to look at it from a marketing perspective and develop a complex measurement system to gauge success and be able to predict the best route for future development.

This problem will be addressed more clearly through the case of Company X. Company X is an online media publisher dedicated to deliver news and editorial content. It is making money out of selling online media space. This company is responsible for several projects, and the author of this thesis was working on SEO planning and implementation for one of those project.

1.3 Research objective and research question

The objective of this research is to create an assessment tool for measuring the effectiveness of search engine optimization for content-based websites by tracking traffic and its quality with Google Analytics.

The main question to answer is:

How to measure the effectiveness of SEO for content-based websites?

The additional questions to be answered during the research process are:

How SEO fits in the marketing strategy?

How to determine the specific goals and objectives of the SEO campaign.

1.4 Methodology

The selected research method for the study is qualitative research. According to Carson et al. (2005 pp. 63-65.), qualitative research strives to get a meaningful and

significant insights and by doing this to build a new theory. During the study prior theoretical background is used as a frame and a foundation but it does not serve as a constraint. The purpose of the qualitative research is to answer the question “why” and “how” in relation to the topic of study. Qualitative research tends to be semi-structured or even unstructured as during the research process a lot of unpredictable events could occur. The main reason for conducting a qualitative marketing research is deepening the understanding of the particular phenomena from marketing and managerial perspective with the focus on why and how. In order to come to the conclusion, the quantitative data is gathered from the particular web analytics tool. According to Maxwell (2010, p. 476), key qualitative researchers are in favor of using numbers in qualitative research.

This work is based on action research with the literature review of books and articles about search engine optimization, written by both academics and practitioners, and action research. The data was acquired during 7 months of working at Media Company X, for which the author of this thesis planned, implemented and analyzed SEO campaign. Goal setting was conducted using SMART criteria, and quantitative data was collected with Google Analytics. In order to come to the conclusion, the quantitative data is gathered from the particular web analytics tool. According to Maxwell (2010, p. 476), key qualitative researchers are on favor of using numbers in qualitative research.

Action research is a process of studying a real organizational issue which will lead to the practical contribution to the case company. The main characteristic of action research is the researcher being actively involved in the case company operations, and intends to bring a positive changes to its work and at the same time to build a new practice-based theory for the research community. It is argued that action research usually has a lack of replicability and generalizability, and thus the researcher should pay special attention to the explicit reporting and sufficient data collection, including sources not only from one narrow discipline in focus but other relevant complementary literature as well (Thorpe and Holt , 2008 pp. 17-19).

2 SEARCH ENGINE OPTIMIZATION IN MARKETING PERSPECTIVE

2.1 Concept of search engine optimization

2.1.1 The evolving nature of SEO

Strong online presence cannot be created without the practice of constant development and promotion of website, and this practice is known as search engine optimization. According to one of the world's most influential SEO practitioner Rand Fishkin (2016), Search Engine Optimization is “*the practice of improving and promoting a website to increase the number of visitors the site receives from search engines*” by “*making the website easy for both users and search engine robots to understand*”.

Jerri L. Ledford describes the technical perspective of SEO as “the science of designing your website to maximize your search engine rankings”. Jobber and Ellis-Chadwick (2013, p. 681) give the further insights into the technical perspective: “*SEO involves the achievement of the highest position in the natural listings on search engine results pages after a keyword or phrase has been entered*”. Search engine algorithms consists of around 200 separate variables that are constantly updating. Based on their work, search engine is able to identify the most relevant web page for the particular keyword or phrase that is typed in.

The marketing perspective of search engine optimization is described by Brian Clark (2015) as “*building a site that is friendly to search engines*”, the end goal of which is “*let other people find you with the language they use when searching*”. Jari Juslén (2011, p. 147) states that search engine optimization is a systematic and long-term process of making your website reachable by as many right visitors as possible through organic search.

The term ‘SEO’ is around 18-20 years old. Although the philosophy behind search engine optimization has been changing and evolving over time, most of the principles are still the same. The practice of search engine optimization is based on the knowledge of how search engine works. In short, search engine is an answer machine and is working according to algorithms. When a user types a keyword in search bar, it firstly identifies the pool of web pages that are relevant to the topic and rank them

according to wide range of factors that are known only by search engine developers. Those web pages that have the highest quality content, the most trustworthy domain and are the most relevant for inquirer (from the point of view of search engine) are ranked higher. Search engine robots are all the time crawling the web to identify new pages, check the old ones and index them - add them to the pool of all pages. (Fishkin, 2016).

According to Enge et al (2012, p. 2), the mission of search engine is to provide users with the most relevant, fast and fresh result to the question. Therefore, they are constantly working on developing their algorithms and try to prevent any manipulation with the search results. Sullivan (2013) underlines the evolution of search technologies and the following evolution of SEO tactics due to the changes of search engine algorithms. In the beginning, internal factors of SEO optimization were of the greatest importance. They were mostly associated with manipulation with HTML elements and so-called “keyword stuffing” (loading a webpage with excessive amount of keywords). As soon as search engines started practicing link analysis for ranking, SEO practitioners concentrated on link exchanging and buying. In those times it was possible to get the highest ranking only by paying other websites for publishing links with right anchor words, directing to the website. Nowadays search engines are developing the mechanism to provide people with more personalized search results according to their old searches and their social network activity. Now SEO expert not only need to be up-to-date about changes in the search engine algorithms but also look at SEO from marketing perspective, and SEO itself became a difficult and long-term campaign.

To sum up, search engine optimization practice consists of website structure, design and content improvements for bringing greater amount of right visitors to the website from search engines. Thus SEO is becoming a part of company’s marketing strategy in Internet and a tactic to achieve desired business goals. As search engine optimization is closely connected with website structure and design, it should be considered seriously during the website planning stage.

2.1.2 On-page optimization techniques

Search engine optimization practice include internal and external optimization techniques. On-page techniques are the ones that are applied to the website itself right from the beginning. These techniques are not directly driving traffic to the website but make it search engine friendly (Elmansy 2014, p. 6).

According to Juslén (2010, pp. 153-162), there are several main on-page techniques that have an effect on SEO progress: optimization of domain name, website structure, content, internal links and such page elements as page title, headers, alt attribute, pictures names, urls, meta description. These are the components of page that search engines are able to see and interpret.

Here is a brief description of on-page optimization techniques that are found to be the most appropriate for content-based websites:

1. Domain name (www.example.com)

Domain name is the address of the website in Internet. According to Juslén (p. 156), domain name is an important component of website optimization. At best domain name should correspond to the main keyword, e.g. for a website about dogs in Finland it would be great to acquire a domain name “dogsinfofinland”. Enge et al. (2011, p. 461) reminds to stick to top level domains like “.com” and use 15 characters at the most for domain name.

2. Website structure and content

SEO-friendly website structure and targeted content are the core of effective search engine optimization. SEO-friendly website is noted for the following features. First, it should be built on a good CRM system and in a way that search engine robots are able to easily find all new content appearing on website. Second, content for the website should be created on the base of properly done keyword research that lay the foundation for reaching the target audience. Third, new content should be constantly being published.

Text content written in accordance with keyword research is one of the most significant components of internal SEO. Juslén (2011, p. 159) notes that content of the website should be planned from both readers and search engine robots perspective. Dover and Daffor (2011, pp. 40-41) states that from SEO perspective good content is characterized by following features:

- It feeds a demand, e.g. well-written recipe of chocolate cake with great photos could answer the demand of users who want to make this dessert.
- It is linkable, which means that other are willing and able to link to it from their websites or share it in social media or message boards.

In order to improve the chances of website to be found by the right people, keywords list is created. Keyword is a word or sentence that user is typing in search engine, and therefore website content should correspond to it. The list of keywords could be created with the help of Keyword Planner, Google Trends and website statistics. There are two different types of keywords. Short-tail keywords refer to the most popular quires, e.g. “Sibelius quotes”. Long-tail keywords are unique searches that are quite rarely searched (might be only few times a day). However, all together they comprise the majority (around 70%) of all worlds’ searches (Enge et al. 2012, p. 461). Example of a long-tail keyword could be “Chart of Finnish market in 2001”. The greater the search volume is, the higher the competition for a keyword, and thus it is more difficult to achieve high ranking. At the same time for long-tale keywords, the competition rate is lower and they are bringing more targeted visitors to the website.

According to Juslén (p. 155), search engines also read just 500 first words. Although it is advised to publish clear and understandable short texts with subheadings, it is necessary to mind the purpose of the particular webpage and target audience first. If it is not possible to cover the topic and satisfy visitors’ needs in short, it is possible to write as much words as needed, but avoiding vacuity. The keywords in bodytext are emphasized with using bold (), and thus crawlers will pay a special attention to them. However, mind that the excessive use of bold could disturb the readers.

3. *Internal links*

Internal links are the ones that point on another webpage at the same website. The creation of internal links helps search engine crawlers to index all pages easier and understand the hierarchy of website better. By linking to other articles on the related topics, it is possible to make a navigation easier for the visitors and persuade them to stay longer on the website. It is also an effective way to drive traffic to the most important pages. (Dover and Daffor 2011, p. 110).

4. Page title

Page title is an element in the head section of the webpage that is located above the browser menu and control bar. Besides content, it is one of the most important elements of the webpage. It also appears in search engine results page, and thus should precisely reflects on the particular webpage's content. (Enge et al 2012, p. 39).

5. Website URLs

Website URLs should be permanent, point to the specific webpages and be also human-readable. URLs should contain the keywords, because this helps to rank better in search. “www.example.com/products/pricing” could be a good example of an URL that is easy for visitors to understand and is also great from search engine perspective as it clearly shows the hierarchy of the information on the webpage, and thus search engine is able to define its relevancy. (Dover and Daffor 2011, pp. 38-39).

6. Alt attribute and names for pictures

Alt attribute is used in HTML for providing alternative text for an image, and thus make it able for search engines to understand what an image is about and correlate it to the overall page content. Adding keywords to the pictures make them searchable, for example, in Google Images –results. Moreover, in a case where visitor has a slow Internet connection, and could not load the pictures, alternative text will appear on the screen instead of image and provide its description. (Enge et al 2012, p. 112).

7. Section headings

Heading and sub-headings of the text are distinguished in HTML as h1 to h6 with the corresponding importance. They help both website visitors and search engines to understand the main ideas behind the whole piece of content. Although it is argued that h1 has lost its value over time, it still has an indirect value because this header is usually the first sentence visitors see on the page. If it appeals to their needs, they are not leaving the page immediately. The percentage of visitors engaged with the content sends a good signal to the search engines and increase the chances of the website to achieve high rankings. (Purtell 2014.)

8. *Meta description*

Meta description is a short description of a webpage that is shown as a preview snippet in search engine result page. Website webmaster is able to write it manually, and thus make it more appealing to users. (Dover and Daffor 2011, p. 45.)

2.1.3 Off-page optimization techniques

Off-page optimization techniques are applied outside the website and have a direct effect on its position in search engine results page (SERP), increase visibility and drive traffic to the website (Elmansy R 2014, p. 6). These techniques are associated with link building or direct marketing of the website in Internet with an intent to acquire links from other websites.

According to Enge et al. (2012, p. 287), off-page optimization is a fundamental part of SEO and ongoing process, without which it is not possible to promote the website and achieve high position in search engine results page. Besides this, external links are driving traffic to the website from the ones that are linking to it. The more links you have the better it is. Search engines are assessing how many other pages are linking to the website and how popular they are. Although not only the amount of received links matters but also their quality. From SEO perspective, the most effective links are the ones from popular websites, which are ranking well in search engines. One link from good website could add more “points” from search engine than ten from small blogs and websites.

The first step of link-building campaign is setting goals. They should be precise and measurable, e.g. “increasing organic referral traffic by x% till xx.xx.xx”. At the beginning it is very difficult to estimate the value of the referral traffic and thus figure out what would be the increase in sales. However, it would be great to put some numbers here and make sure that the links you acquire are contributing to the overall business goal.

Enge et al. (2012, p. 305) describes several link-building approaches:

- Exchange links with the partner websites
- Create compelling high-quality content or viral content and promote it to other website owners and media. In general, publishers are more willing to link to the piece of content written by the experts with minimized commercial nature. High-quality content also increases the chance that some websites will find it on their own and link to it without special request.

According to the latest link building survey done by Skyrocket SEO agency (Agate 2014), “content+outreach” strategy remains the most popular and it is believed to be the most effective as well. Outreaching means finding the websites whose owners would probably be interested in publishing a link and pitching to them this idea (Sebald 2013). Another frequently used tactics in 2014 were infographic promotion and guest posts.



Figure 1. The most effective link building tactics in 2014

Search engine determine the relevance of the link by its location within the page, anchor text, surrounding text, etc. (Enge et al. 2012, p. 287) Therefore, it is important that these links contain chosen keywords (e.g. brand name or a particular keyword that a website is trying to rank).

Although there is a possibility to leave self-created links in blog comments and non-moderated directories, most of SEO experts advice to concentrate on editorial links. Better spend some more time and efforts and get links published by website owners, and thus add more value to your business. An important notice is that although there are still a lot of link farms, directories and websites that are selling links, this practice is strictly against Google guidelines. “Buying or selling links that pass PageRank violates our webmaster guidelines” (Cutts&Ohye 2007). If a website is caught buying links, it will receive a heavy penalty and lose traffic. It is also not recommended to leave self-created links in blog comments and non-moderated directories.

The results of link building campaigns is an investment that has long-term gains but first results will take some time. The success of this campaign will mostly depend on the ability to build relationships with the right people. Planning a link-building campaign even before writing a piece of content could be an effective strategy. In this

case it would be possible to create a “hook” for the particular people, and thus increase the chances that they will be willing to share a link on their websites.

As for other off-page optimization factors, for the past two years there has been a vivid discussion about the existence of so-called “social signals” that have an effect on search engine optimization. Back in 2010, Google and Bing stated that they are taking social media activity into account, e.g. tracking links shared within Facebook, calculating the authority of Twitter accounts, looking at the amount of followers (Sullivan 2010). According to the survey made by Searchmetrics (DeMers 2012), there are several social media factors that are directly affecting rankings, and they are e.g. number of people that like a brand in Facebook, Facebook shares, comments, number of Twitter followers and number of tweets mentioning a brand.

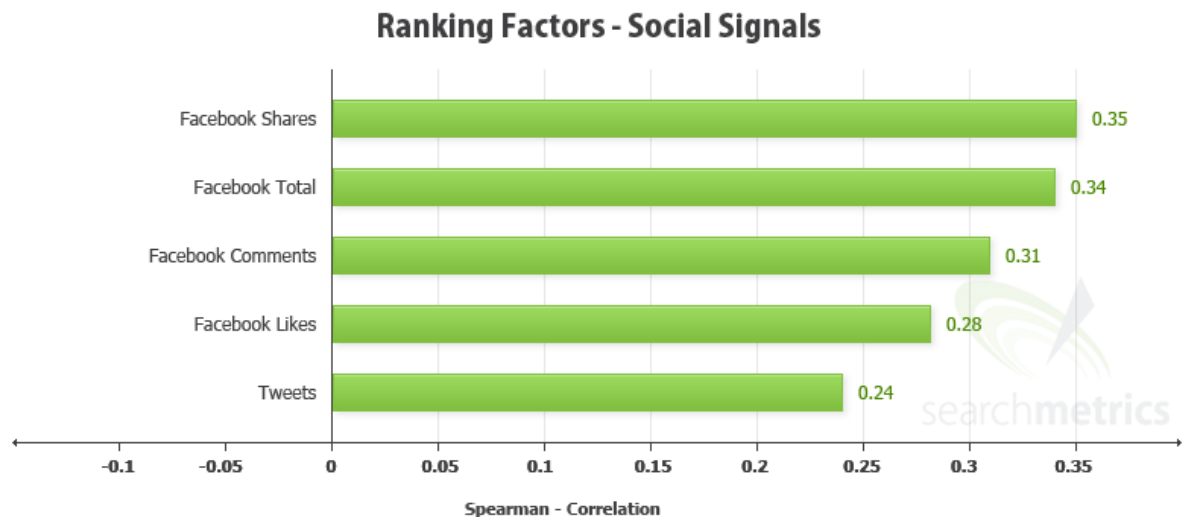


Figure 2. Social signals

Although some researchers have found a correlation between social signals and SEO rankings, the causation is still under question. In 2014 Google made a statement that there is no special attention paid to social signals when it comes to ranking (Slegg 2014). However, the indirect impact of social media is indisputable. For instance, publishing links in social media can help get it indexed faster, bring more online visibility and awareness, increase traffic to a website, etc (Zadro 2015). The correlation between social signals and ranking factors can be seen in Figure 2.

2.1.4 Web-analytics

As it was stated by physicist and engineer William Thomson, without expressing in numbers, your knowledge is of a meager and unsatisfactory kind. A similar search engine optimization campaign could not be effective without web-analytics. Juslén (2011, p. 314) defines web analytics as gathering data related to web page performance and marketing effectiveness and their analysis. According to him, there are four stages of web analytics: constant collection of data about website performance and visitors' behavior, data storage, data processing and analysis, reporting and presentation.

Kaushik (2010, p.5) describes other important angles of web-analytics. According to him, web-analytics is “the analysis of qualitative and quantitative data from your website and the competition” in order to “drive a continual improvement of the online experience that your customers, and potential customers have”. If approaching this issues seriously, your actions will “translate into your desired outcomes (online and offline)”.

Google Analytics is named as the most popular analytics system that provides different analytics solutions and is free of charge (Juslén 2011, p. 314). With the data, gathered with the help of analytical software it is possible to get insights on how successful are the current marketing campaigns and what improvement should be done to improve engagement with the visitors.

A starting point for a SEO campaigns could be defined by answering the following questions. This is the basic information that is possible to get out of Google Analytics.

- a) How many visitors have been on the webpage during the certain period of time?
- b) What are the channels where they are coming from?
- c) What are the most visited pages on the website?
- d) What is the average time per visit? What is the bounce rate?
- e) What are the visitors' geographical positions?
- f) What is the percentage of new and returning visitors?

There are a lot of different web analytics metrics that are helping to understand traffic and get insights out of it. However, it is important to remember that changes in metrics have only an indirect effect on business results. Here is a brief description of the basic and most important metrics:

1. Number of indexed pages

The simplest way to estimate the number of indexed pages of the website is to type *site:your-domain.com* into the search bar (Southern, 2015).

2. Tracking traffic by search engine

Identifying how many traffic each search engine is driving to the website. Although it may be thought that all search engine are basically the same, the algorithms of their work are slightly different and thus the effect of SEO might be different for each of them. (Enge et al. 2012, pp. 448-449).

3. Tracking branded traffic

Branded traffic is a type of traffic comes from navigational queries, when searchers are typing the company name or the name of the website into search engines. Usually branded traffic brings the greatest amount of conversions but at the same time non-branded traffic presents more opportunities and driving new visitors and possible clients. (Enge et al. 2012, p. 455).

4. Checking traffic sources

According to Park (2009), in analytics reports all traffic coming to the website is divided into three sections: direct traffic, referral traffic and organic (search-engine) traffic.

- Direct traffic is those visitors that type the url address of the website directly into the browser address bar or click the a bookmark in their favorites.
- Referral traffic is those visitors who are referred by links placed on other websites. Studying referral traffic gives the possibility to track whether the website is receiving new links and exactly what websites are linking to it. This will help, for

example, to track the results of link-building campaign by identifying newly received external links.

- Organic traffic consists of visitors who are referred to the website via unpaid search engine listings, e.g. via Google search results page.

5. *Pages getting organic traffic*

By tracking the amount of traffic that was driven to each page, it is possible to identify the pages that are ranked high in search engine and visitors are willing to click on them.

6. *Action tracking*

Tracking the particular actions that visitors are performing on the website. According to Enge et al. (2012, p. 461) an action could be called a subscription to newsletters, contact form submission, share in social media, reading x amount of pages, spending x minutes on website, viewing a particular piece of content, etc. The named actions are especially important for content-based. Tracking is done by setting up a code in the analytics program and attaching it to the website. It is important to track not only the amount of actions but also to determine the channels driving the greatest amount of accomplished actions. This will give an insight on the most efficient channels and could be a proof of successful SEO campaign. Moreover, an action itself could be very valuable, e.g. for news websites who are selling subscription each of it will be associated with profit.

7. *Conversions*

Conversion is an action that in perspective could bring profit to the business. According to Enge et al. (2012, p. 470), there are two indicators that are the most important to pay attention to:

- *Conversions by channels*, showing what channels (SEO, advertising, social media or email marketing channels) are bringing the greatest amount of conversions. Conversion cost could be calculated out of the total cost of traffic from each channel.

- *Conversions by webpage*, showing what pages are resulting in greatest amount of conversions. For example, in case we are tracking subscriptions, it would be significant to know what pages with what piece of content are motivating people to buy a subscription or sign for newsletter.

Conversion tracking goes in line with conversion optimization, which could be defined as “outcomes divided by Unique Visitors (or Visits)” (Kaushik 2010, p. 55). For example, if a news website gets 5000 visitors in a day, and 100 of them pay for the subscription, the conversion rate for this goal is: 2% (Conversion rate: $100/5000*100\%$).

Conversion rate improvement is one of the greatest task for every SEO practitioner. It is possible to generate more conversions by improving website content and design according to the needs of visitors. Channel efficiency could be identified by comparing efficiency of SEO channels (organic traffic, referral traffic driven by link-building campaigns), advertising channels (e.g. paid search), social media marketing channels (e.g. Facebook) and email marketing channels (e.g. newsletter). The most efficient are those sources that bring more valuable traffic (visitors who are converted into customers or leads).

8. *New vs returning visitors*

Besides finding new traffic channels, it is also important to study the behavior of existing visitors. The number of returning visitors usually reflects on how the website content is answering to the users need.

9. *Bounce rate*

According to Kaushik (2010, p. 51), bounce rate could be technically defined as the percentage of sessions on your website with only one page view. Increase in bounce rate could be the sign that users are not enough satisfied with the content, and thus are not willing to check other pages of the website. In relation to bounce rate, there are also two things to look at: how the bounce rate differs from page to page and from one traffic source to another.

2.2 SEO as a part of marketing mix

2.2.1 Marketing mix in the digital environment

Marketing mix is considered as the key element of marketing theory and practice. Since a major shift to digital context, many debates have been going on how adoptive marketing mix could be throughout the changes in the environment. Some researchers argue that 4P's framework should be changed: either more elements should be added to the mix or it should be changed completely. Others believe that marketing mix can be still successfully be applied and fit in the digital context. (Dominici 2009, pp.16-18)

Jobber and Ellis-Chadwick (2013, p. 671) define digital marketing as “the application of digital technologies that forms channels to market and to achieve corporate goals through meeting and exceeding customer needs better than the competitors”. They noted that digital marketing not only is emulating almost every aspect of marketing communication and traditional media channels but also presents a method of distribution.

Promotion

Promotion refers to integrated marketing communication. According to Jobber and Ellis-Chadwick (2013, p. 508-518), its core elements of promotion are:

- message (mean of transferring information from a sender to recipient)
- tools (advertising, personal selling, sales promotion, digital promotion, direct marketing and PR)
- media channels (broadcast, print, Internet, mobile, outdoor)
- people
- context (industrial, consumer or public sector)

Place (Jobber& Ellis-Chadwick 2013, p. 632) refers to the “distribution of products/location of services that needs to be available in adequate quantities, in convenient locations and at times when customers want to buy them”. In our times, distribution of products and services is moving to the Internet.

According to review made by Dominicci (2009, p. 18), the meaning of each of P could be easily changed for the needs of digital century. As for the moment, there is no new widely accepted model available that would be able to substitute the traditional one, in this work SEO is considered to be the part of a traditional marketing mix. This means that SEO efforts should be consistent with and complement the overall marketing mix strategy.

2.2.2 The role of SEO in marketing mix

The idea of search engine optimization as the practice of website promotion and improving corresponds to several elements of the marketing mix: place and promotion. In case of content-based websites, the website itself is a channel of distribution content. It should provide users with a smooth and user-friendly architecture and design, which allows them to easily find content and engage with it. Website is also a medium to reach a numerous and dispersed audience and a tool to build relationships with users.

Therefore, the role of search engine optimization is not limited to the technique of growing visitors. SEO is an important part of the overall marketing mix, and from marketing perspective it could provide a valuable contribution to business objectives, e.g. growth in number of potential customers and revenues.

2.2.3 ROI in SEO

Tracking the progress and measuring the results is the vital part of SEO. It will not be possible to improve SEO activities without establishing a measurement system. Usually websites are concentrated on month-to-month and year-to-year statistics as it is important to consider seasonality (e.g. searches about trips to Lapland are in demand before Christmas).

It is important to start measuring SEO efforts from the very beginning. The measurement is done in coordination with website objectives that are defined beforehand. According to Enge et al. (2012, p. 447), the website objective could be generating sales, obtaining leads, obtaining donations, generating ad dollars, promoting a brand, etc. For the most of content-based websites, business goal consists

in either generating ad dollars or selling subscriptions. It is also common to mix advertising and subscription model (Rappa 2010).

Keeping in mind the end objectives, the one could determine the key performance indicators for the particular case. For instance, it could be:

- amount of traffic
- amount of traffic on a particular page
- amount of conversions
- particular pages where visitors are converted (visitors doing some actions e.g. signing-up, requesting a demo, or viewing a specific piece of content).

Enge et al. (2012, p. 449) highlights that although SEO practitioners use metrics such as visits and conversions, a company's managers usually measures the success in amount of sales, costs and returns. The main goal of search engine optimization campaign is to make sure that all efforts not only have an influence on the website (KPI's are improved) but also there is a correspondence between these KPI's and the overall business goal.

First and the most difficult step in assessing SEO success is making an objective baseline assessment by answering questions discussed in the previous section dedicated to Web Analytics. Afterwards it will be crucial to separate the results that are driven by SEO from the uncontrollable changes caused by external factors (e.g. seasonality). SEO KPI's are measured keeping in mind that other factors stay equal to the corresponding baseline ones.

3 METHODOLOGY

3.1 Research method

For this study, an action research strategy was chosen. There were several grounds for choosing the research strategy:

1. The study is related to information technology
2. The study aims to contribute to the practical concern of case company

3. The researcher supposed to be a practitioner at the same time

Literature review on research methods in the field of information systems identifies two possible research methods: action research and design study research. Some scholars believe these research methods to be quite similar, especially in the field of information systems. Goldkuhl (2013) derives the similarities between action and design research and they are: intend for acquiring useful knowledge, combination of doing and evaluating, collaboration between researchers and practitioners. Although there are many similarities, Iivari & Venable (2009) point that design research strives for a new technology while action research could apply already existed technologies to a particular situation.

Eventually the action research was chosen, as the outcome of the study is not associated with "designing" the artefact for solving the problem but with applying general theory and using already existed technology for a particular case.



Figure 3. Action research process

Figure 3 above illustrates the research process. It started with problem statement and literature review on current SEO literature in order to study SEO strategies and eliminate those SEO techniques that will be more suitable for content-based websites.

The second stage of the research process was to plan a SEO campaign for a case company's website using SMART criteria. The third stage was plan implementation and it was followed by collection of quantitative data with the help of analytical software (Google Analytics). The last stage of the research process was to reflect on the results and make suggestions for the future development of the topic.

3.2 Data acquisition

The research uses the results of SEO campaign, which was executed for the company X. Company X is an online media publisher dedicated to deliver high-quality news and editorial content. This company is responsible for several projects, and the author of the thesis is working on SEO planning and implementation for one of them – Project XX.

SEO campaign was executed in defined time frame during which different on-page and off-page optimization techniques were applied. This study is dedicated to the development of measurement approach and interpretation of analytics for content based websites. For the detailed description of the techniques used refer to Appendix 1.

For brand new or redesigned websites it usually takes some time for first SEO results to show up. As Project XX was a redesigned website, and thus the reporting period of 6 months was chosen. The starting point was chosen to be the first of January (1 January 2015) and the ending point – 30 of June (30 June 2015).

3.3 SMART analysis

SMART analysis presents the guidelines for developing well-defined and realistic objectives. These criteria were firstly mentioned by George T. Doran in 1981 (quoted in Lawlor 2012). They are used to set the business goals in order to ensure that each goal is Specific, Measurable, Achievable, Relevant and Time-bound:

- specific – requires exact definition of what is being pursued
- measurable – requires a number to express completion
- attainable – confirms that a particular goal could be achieved

- relevant – confirms the benefit for a business
- time-bound – reasonable time frame for goal achievement

Some researchers are also using SMARTER analysis, where the last ‘ER’ stands for “Evaluate” and “Re-evaluate” or “Ethical” and “Recorded” (Dell 2013, p.22).

SEO practitioners are also using them as a tool for planning their SEO campaigns. The most explicit example of how to apply SMART for SEO was written by international SEO consultant Aleyda Solis (2012). She stresses the importance of development a cost-effective SEO process and proposes to use SMART- guidelines for identifying and measuring the best strategy to achieve desired goals. Table 1 describes SMART criteria in relation to SEP campaign planning process.

Table 1. SMART criteria and SEO

Specific	Specific goal answers several questions: what are the website’s objectives to be accomplished with the SEO process and who are involved.
Measurable	Set the tools for measuring the success of SEO campaign according to defined KPI’s.
Attainable	Define the constraints and requirements that might have an effect on the campaign’s effectiveness.
Relevant	Verify the relevancy of the website’s objectives with the overall marketing and business goals, stressing the predominance of expected benefits over the related costs.
Time-based	State the time frame for SEO campaign implementation. When the desired goals are planned to be achieved?

3.4 Validity of the research

According to Seale (1999, pp. 140-157), reliability refers to the possibility of generating the same findings by other researchers who are studying the same topic. He names it as an external reliability and points out that in practice this reliability is not always achieved in qualitative studies because of the settings that are changing over time. It is proposed to compensate this difficulty by a detailed description of the research process which clearly shows what was done and how the researcher comes to the conclusion.

This study is done in the constantly changeable field of search engine optimization. Search engines are all the time working on their algorithms, and thus it is not possible to fully replicate it. However, it is assumed that by studying the same topic and by conducting an action research in order to create the measurement system for SEO campaign assessment another researcher would present the same idea of aligning SEO objectives with the overall business goals.

3.5 Overall constraints and limitations

SEO & Managerial decisions

The first and the most important limitation is that the author of this thesis is responsible only for SEO planning and implementation, but not for the managerial decisions to establish and change prices for advertising. Therefore, achievement of the SEO goals only creates the perfect ground for future price increase but not directly cause it.

Nature of business

As was stated in the beginning of the section, Project XX is involved in publishing editorial content. Editorial content has high quality standards, and it is not advertising base. As copywriting articles are 100% dedicated to the SEO and advertising purposes, the main purpose of editorial articles is to provide reader with the relevant content.

In the section about on-page optimization, it was discussed that the structure of the text and the placement of keywords work well for SEO. In case of Project XX, this sometimes contradicts with the editorial purposes. Therefore, the task of the SEO practitioner is to identify the consensus in every case in order to benefit both readers and SEO.

Technical support

As company X is responsible for several projects, its technical support to the particular project is very limited. Therefore, the optimization of those on-page elements that require professional technical assistant take some time.

Limited resources

Despite from concentrating on SEO planning and implementation, Company X is also practicing other digital marketing activities. Therefore, the time and money that Company X invest in SEO were limited.

4 FINDINGS AND ANALYSIS

4.1 Setting SEO goals and frameworks for the Project XX

The business goal of Project XX's website is to make money out of its attractiveness to advertisers. Two main factors that advertisers take into account are the amount of visitors and the size of subscriber base. Advertisers are interested in website traffic as they are paying for advertising banners. Greater amount of traffic means greater coverage for advertised products and services. Advertisers are using it to spread their promotional materials via Project XX's newsletter.

Following plan for search engine optimization campaign is developed by the author of this thesis with the help of technical support of the Company X. Google Analytics was chosen as a tool for measuring SEO performance, because it is free of charge, user-friendly and deep-dive analytics tool (Clifton 2012 p. 18). The data is tracked on a monthly basis and the final assessment is made after 6 months: this would be the

sufficient amount of time for the changes to be clearly seen. Table 2 below presents the goals set for a Project XX using the SMART –guidelines.

Table 2. SMART criteria

Website's goals	SEO goals	Indicators	Goal / Time
Visitors	Increase the amount of search engine traffic, referral traffic and direct traffic	Organic traffic ↑ Referral traffic ↑ Social traffic ↑ Direct traffic ↑	2 times more traffic in the end of reporting period
Subscriber base	Increase the quality of traffic (get more valuable traffic that brings conversions)	Amount of conversions ↑ Conversion rate ↑	2 times more conversions in the end of the reporting period

As it is shown in the Table 2, the major goals for the case website would be to increase the amount of visitors and grow the subscriber base. The subsequent SEO goals are to increase the amount of search, referral and direct traffic and to increase the quality of traffic.

1. Increase in the amount of visitors

Goals for SEO

Increase in the amount of visitors could be achieved by driving to the website more organic traffic via search engines, referral traffic from link-building campaigns (including social media) and direct traffic via existing users. Those types of traffic are discussed in the section dedicated to web analytics (2.1.4).

Key performance indicators

Increase of search engine traffic could be observed in various Google Analytics reports, e.g. under the Source / Medium report in the section Acquisitions > All Traffic. It would be marked as [name of the search engine / organic], e.g. “google / organic”

Increase of referral traffic could be observed under the Referral report in the section Acquisitions > All Traffic. It would be marked as [name of the website from where traffic is coming from / referral]

Increase in social media traffic could be observed in the section Acquisitions > Social.

Increase in direct traffic could be observed under the Source / Medium report in the section Acquisitions > All Traffic. It would be marked as “(direct) / none”.

SEO goal is to have at least 2 times more traffic from those channels in the end of reporting period.

Relevancy to business goals

As was stated in the beginning of the section, the amount of visitors have a direct impact on Company X’s attractiveness to advertisers. Considerable growth of the website traffic might be a cause to charge more from company’s advertisers. Thus, the successful achievement of this SEO goal might have a positive effect on company’s revenue.

2. Growth of subscriber base

Goals for SEO

Growth of the subscriber base could be achieved by improving the quality of traffic. The quality of traffic is defined by the amount of conversions that were successfully accomplished. In case of Project XX, the more quality traffic is driven to the website, the more email addresses are added to the subscriber base.

Key performance indicators

The quality of traffic sources could be tracked in different reports in Google Analytics, e.g. by comparing Sources and Goal competitions in the section in Acquisitions > All Traffic. It is possible to compare sources of traffic with the amount of completed goals or with the conversion rate (this metric is discussed in the section dedicated to web analytics (2.1.4)).

SEO goal is to have at least 2 times more conversions in the end of reporting period.

Relevancy to business goals

Size of the subscriber base determines its attractiveness to the advertisers. The growth in number of subscribers might be a cause to charge more for distribution of promotional materials, and thus might have a positive effect on company's revenue.

3. SEO objectives formulated

To increase the amount of search engine and direct traffic by two times using on-page optimization techniques till the end of the reporting period. To increase the amount of referral traffic and social media traffic by two times using on-page and off-page optimization techniques till the end of the reporting period.

To grow the subscriber base by increasing the amount of conversions by two times from organic traffic, direct traffic and referral traffic channels till the end of the reporting period.

From a managerial perspective, these objectives are considered to be the most important as they might have a direct impact on Company X's revenues. The list of on-page and off-page optimization techniques used could be found in the attachments.

4.2 Collected data analysis

The purpose of the following data analysis is to compare the end results of search engine optimization campaign with the baseline data and get the insights out of this (Kananen 2014, p. 237).

4.2.1 Baseline

Before starting any SEO activities, there is a need to define the baseline. Table 3 provides with an overview of basic web analytics data gathered from 1 to 31 December 2014. This data sets a baseline for the assessment of SEO camping results achieved from January to June 2015.

Table 3. An overview of the SEO baseline (1-31 December 2014)

Channels		Visitors	Bounce rate	Session duration	Pages per session
Search engine traffic	Search engine 1	2280	56.97 %	2:49	3.19
	Search engine 2	1245	53.01 %	3:32	3.55
Direct traffic		3335	52.21 %	2:28	2.96
Referral traffic		1410	86.38 %	0:35	1.44
Social media traffic		1158	56.48 %	3:21	3.25

Table 3 shows the amount of visitors, which came to the website via different traffic channels: search engines traffic, direct traffic, referral traffic and social media traffic. Such indicators as bounce rate, session duration and amount of pages per session reflect on the quality of traffic.

Bounce rate could be a sign that readers were not satisfied with the content for one reason or another or they did not get answers to their questions. It is also possible that those visitors got to the website by an accident or they were not provided with a clear idea of what to do next (Kananen 2014, p.232). According to table 3, the highest bound rate was shown by the visitors coming from referral traffic source, and it was 86.38%.

In December 2014, the greatest amount of visitors came from direct traffic channel, and traffic from search engine “2” appeared to be the most valuable (in relation to the session duration and amount of pages per session).

Table 3 also shows the starting point for assessing the first goal: increase in the amount of visitors from particular traffic sources. Overall amount of traffic is one of these basic indicators showing the results of different traffic channels. Showing the increase for traffic is also the best way to prove the value of SEO for company's managerial board. According to the table 3, the most traffic was coming from direct traffic (visitors who are typing the address of the website directly into the browser, visitors who have the website bookmarked, etc.)

Table 4. Baseline / Amount of conversions and conversions rates by channels (1-31 December 2014)

Channel		Amount of subscriptions	Conversion rate
Search engine traffic	Search engine 1	81	3.55 %
	Search engine 2	69	5.54 %
Direct		75	2.20 %
Referral		9	0.64 %
Social		54	4.66 %

Table 4 above shows the starting point for assessing the second goals: growth of the subscriber base by increasing the amount of the conversions from particular traffic sources. In this case, getting a visitor to subscribe to the newsletter identifies as a conversion.

Conversion rate is determined by the relation of the amount of completed conversions to the amount of traffic for the given period, and it reflects on the effectiveness of traffic sources (Kananen 2014, p.235). By analyzing conversion rates, it is possible to identify areas for improvement and make a strategical decision on what traffic sources to concentrate on. According to table 4, in December 2014, search engines were driving the greatest amount of conversions. Therefore, it is possible to assume that

concentrating on getting more organic traffic to the website would be worth spending the resources (time and money) on.

4.2.2 Measuring results

1. Increase in amount of visitors

The goal was to increase the amount of search engine and direct traffic by 2 times using on-page optimization techniques and increase the amount of referral traffic and social media traffic by 2 times using on-page and off-page optimization techniques till the end of the reporting period.

Table 5. Results / Traffic by channels during the reported period of time

Channels		January	February	March	April	May	June
Search engine traffic	Search engine 1	4998	5652	5484	8976	7941	6072
	Search engine 2	1308	1362	1569	2238	2499	2694
Direct traffic		4389	4762	5079	6789	7442	10794
Referral traffic		837	1149	1881	2010	1206	1194
Social media traffic		957	855	2145	2238	1662	1353

The table above shows a gradual increase in the amount of visitors coming from different traffic sources could be observed, even though these numbers differ from month to month.

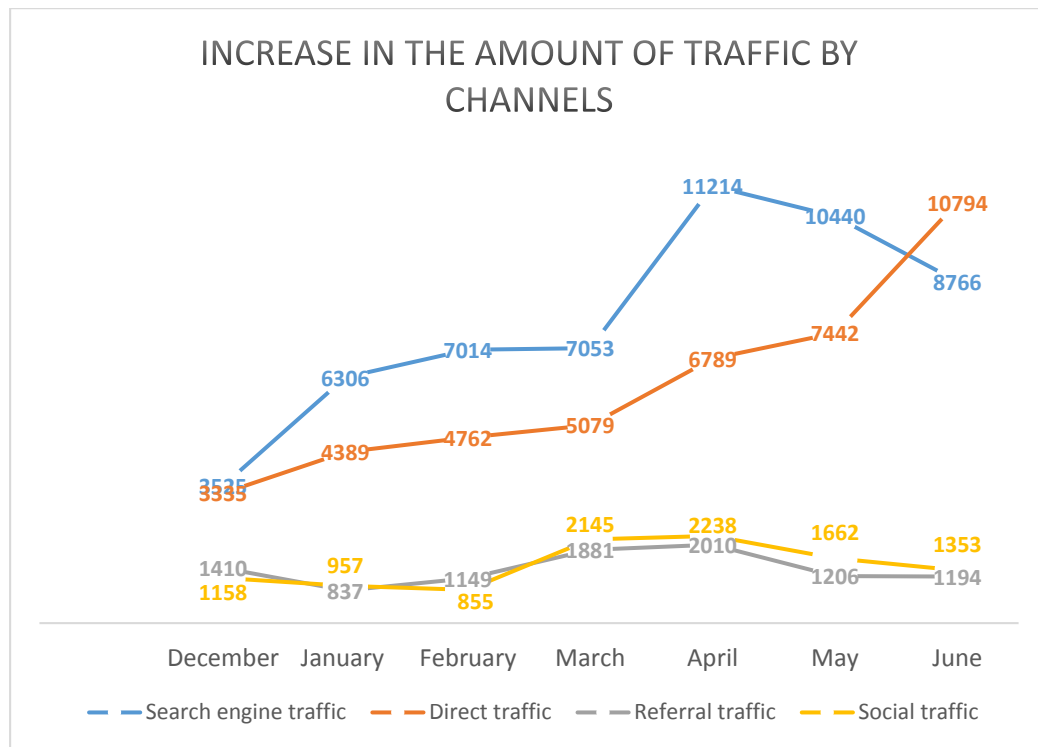


Figure 4. Increase in the amount of traffic by channels

Comparing these indexes with the corresponding ones from December, it could be seen that for several traffic sources the goal of doubling the amount of traffic was successfully achieved.

The amount of visitors coming from search engines (combined numbers of both two search engines) was increased up to 218 % in April and by 148.7 % in June (the end of the reporting period). A small increase could be observed from April to June, which was probably caused by a seasonality issues. Nevertheless, the main goal was achieved, and in future studies it would be interesting to study how seasonality and other unpredictable changers affect SEO performance.

For direct traffic source the increase constituted 223.7 % in the end of the reporting period. Unfortunately, the traffic goals for referral and social media channels were not achieved. The maximum increase in the referral traffic was 42.6 % in April and for social media traffic – 85% in March.

2. Growth of subscriber base

The goal was to grow the subscriber base by doubling the amount of conversions from organic traffic, direct traffic and referral traffic channels till the end of the reporting period.

Table 6. Results / Amount of conversions and conversion rates during the reported period of time

Channel	January		February		March		April		May		June	
	Subscriptions	Rate	Subscriptions	Rate	Subscriptions	Rate	Subscriptions	Rate	Subscriptions	Rate	Subscriptions	Rate
Search engine traffic	1 243	4.86 %	153	2.71 %	114	2.08	336	3.74	312	3.93	162	2.67
	2 129	9.86 %	72	5.29 %	27	1.72	114	5.09	93	3.72	63	2.34
Direct traffic	93	2.12 %	85	1.78 %	86	1.69 %	118	1.74 %	163	2.19 %	188	1.74 %
Referral traffic	6	0.72 %	9	0.78 %	18	0.96 %	42	2.09 %	39	3.23 %	21	1.76 %
Social traffic	138	14.42 %	93	10.88 %	45	2.10 %	111	6.68 %	78	4.64	45	3.33
All channels	609		412		290		721		685		479	

According to table 6, the amount of conversions was fluctuating from month to month. The greatest amount of conversions was achieved in April.

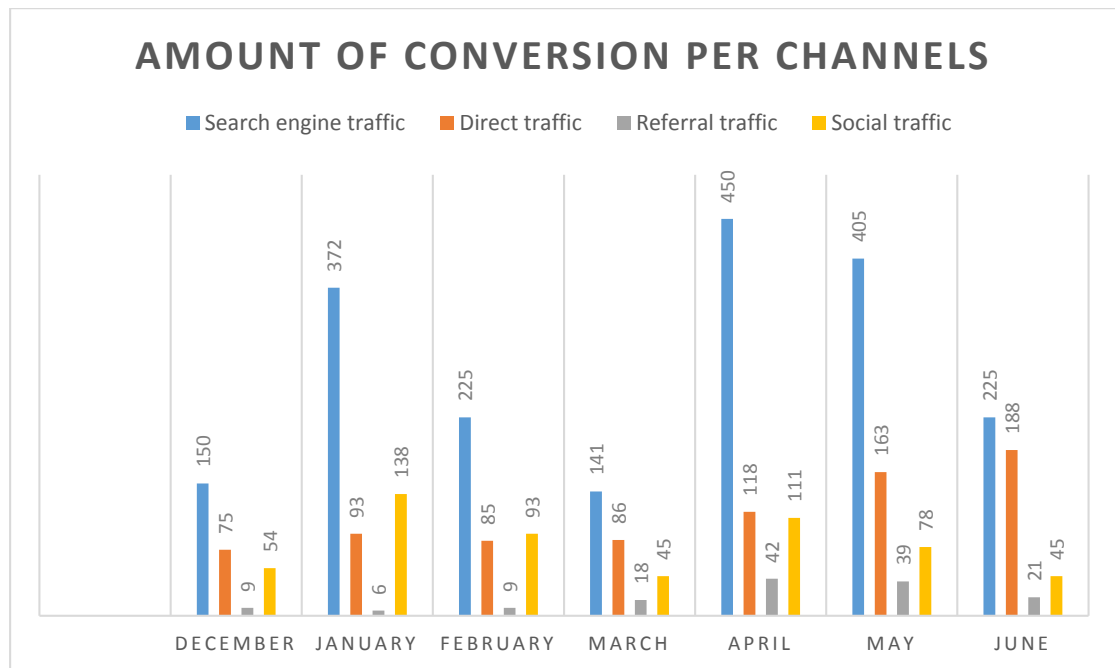


Figure 5. The increase in the amount of conversions per different traffic channels.

When comparing these numbers with the corresponding ones from December, it can be seen that for all traffic sources the goal of doubling the amount of conversions was successfully achieved. The number of conversions from organic traffic sources (combined numbers of both two search engines) was increased by 200% in April, from direct traffic source – by 151% in June, from referral traffic sources – by 367% in April and from social media traffic sources – by 156% in January. However, it is necessary to mention that the increase in conversions was not stable. The only certain assumption that could be made concerns the organic traffic channel, which showed a gradual increase in the amount of conversions over the reported time period.

4.2.3 Assessing the ROI for SEO campaigns

Key performance indicators, which were identified through SMART analysis, were tested during the chosen reported period (1 January 2015 - 30 June 2015). As can be seen in Figure 6, the principles for measuring SEO performance for content-based websites are closely related to the overall business goal. In order to estimate ROI, it is possible to connect SEO performance to sales revenues or any actions done by visitors that are considered valuable for the business.

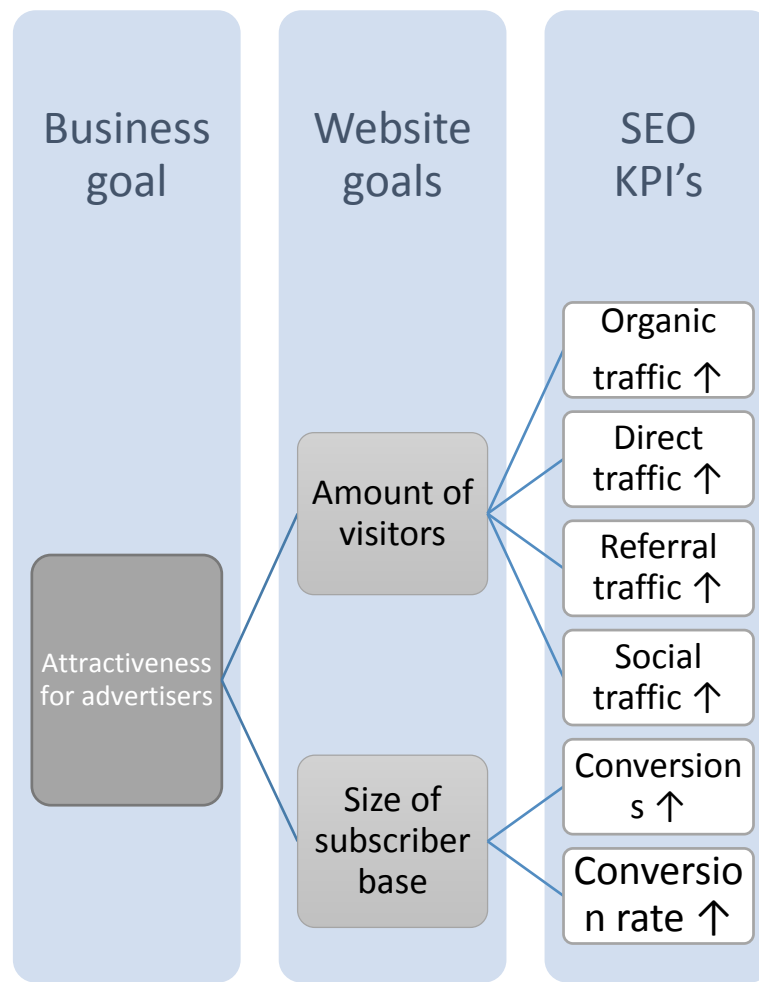


Figure 6. The scheme of measuring the success of SEO campaign for content-based websites.

Sales revenues

Not engaged in e-commerce websites usually are advertising driven. In this case it is possible to attach the impact of SEO activities (increase in the amount of traffic, increase in time on site, number of pages viewed by visitors and etc.) to advertising revenue. For example, with increase in number of traffic the website owner could anticipate the increase in advertising value.

Some websites, especially the ones related to media field, are selling subscriptions. In their case it is possible to concentrate on conversion rate optimization, trying to increase the number of subscriptions sold with the less possible amount of money spent on advertising channels.

Valuable actions

For most of the content-based website, a valuable action could be *newsletter subscription, filling in contact form, sharing content in social media*, etc. In this case, an increase in amount of *newsletter subscription* has both direct and indirect financial consequences. For the websites that are monetized by distributing advertisers' promotional materials via Email, the size of subscriber base has an influence on the amount of money that advertisers are ready to pay. With the growth of the base, it would be possible to charge more for sending the promotional letters. Other websites are just using their newsletters to establish constant communication with their readers and get more traffic to the recently published pages.

Filling in contact form or requesting for demo version could be the first step of the sales funnel. The simple *share of the content in social media* could also bring the positive result to the website in the future.

In the following studies, it would be also interesting to calculate the return on investment in monetary value. After defining the valuable actions, it would be possible to establish a money value for each of them. Effective search engine optimization has a positive return on investment. According to Enge et al. (2012, p. 474), in calculations it is possible to apply the formula below:

$$\text{SEO ROI} = \text{SEO revenue} / \text{SEO cost}$$

SEO cost is the total amount of money spent for salaries or number of hours spent.

SEO revenue = (increase in organic and referral traffic) * average conversions rate * average transaction value.

4.3 Recommendations for further research

Traffic attraction and conversion optimization are the primary goals for search engine optimization. As was mentioned in the previous section, it would be interesting to calculate the ROI of SEO in monetary value. In this case more additional information about the sales processes is needed, e.g. the right to investigate the pricing methods.

After getting familiar with basic metrics, the next step is to start gaining in-depth knowledge of search engine optimization and website analytics, which generally

requires more sophisticated technical skills. In following, some of interesting topics for better and deeper understanding of SEO are discussed.

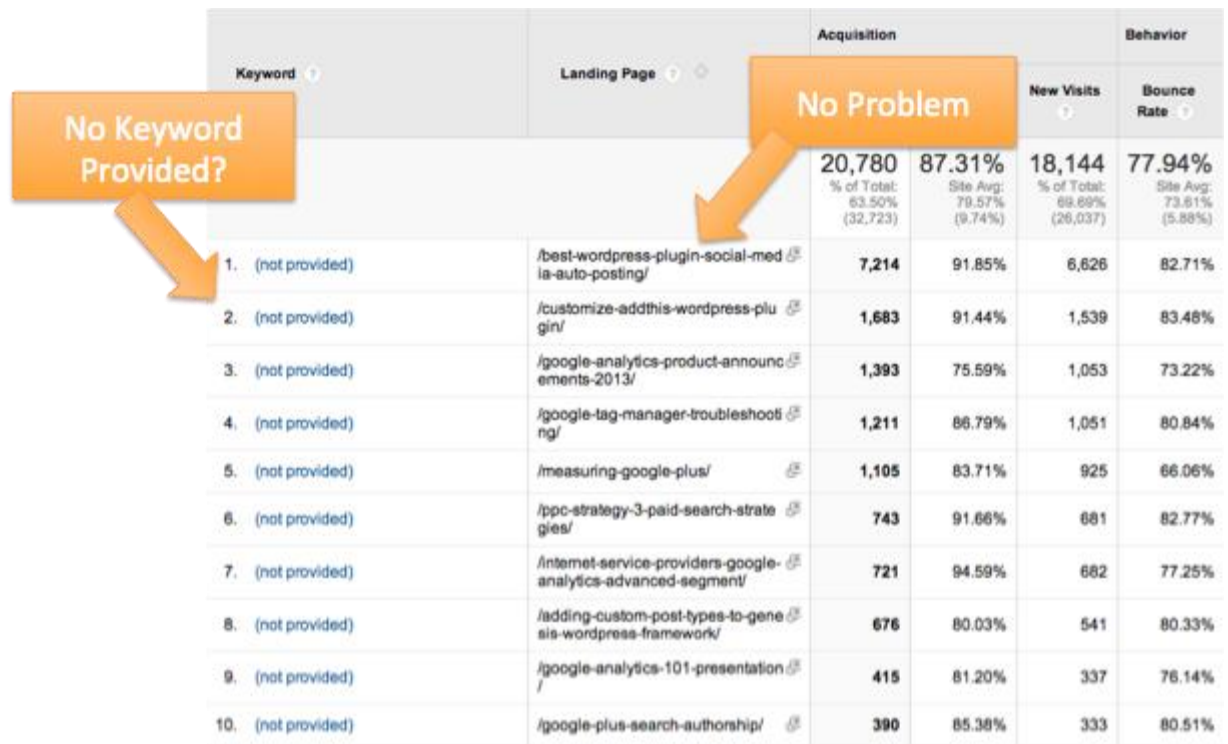
A/B testing

One of the greatest tools for deeper SEO insights is A/B testing. For test execution two different versions of the same webpage are created. The content of the webpages and their design could vary considerably. These two version of the same webpage are shown to the visitors: half of all website visitors sees the first version of the webpage and other half sees another version. The idea is to track and compare the conversion rates for those two versions, and thus identify the most effective one and start showing it for all.

Juslén (2011, p.345) advises to try this test on those pages that have a high bounce rate. By creating a new version of the same webpage and executing A/B testing it is possible to find a way for the improvements. As a benefit of A/B testing, Juslén mentions the speed of obtaining results and its relative simplicity of execution.

Segmenting organic traffic by landing pages

Since all keywords in Google Analytics are now hidden under the label “not provided” due to the privacy issues. Therefore, it is not possible anymore to find out what are the exact keywords that are driving traffic to the website and resulting in conversions.



Keyword	Landing Page	Acquisition		Behavior	
		New Visits	Bounce Rate	New Visits	Bounce Rate
		20,780 % of Total: 63.50% (32,723)	87.31% Site Avg: 79.57% (9.74%)	18,144 % of Total: 69.89% (26,037)	77.94% Site Avg: 73.61% (5.88%)
1. (not provided)	/best-wordpress-plugin-social-media-auto-posting/	7,214	91.85%	6,626	82.71%
2. (not provided)	/customize-addthis-wordpress-plugin/	1,683	91.44%	1,539	83.48%
3. (not provided)	/google-analytics-product-announcements-2013/	1,393	75.59%	1,053	73.22%
4. (not provided)	/google-tag-manager-troubleshooting/	1,211	86.79%	1,051	80.84%
5. (not provided)	/measuring-google-plus/	1,105	83.71%	925	66.06%
6. (not provided)	/ppc-strategy-3-paid-search-strategies/	743	91.66%	681	82.77%
7. (not provided)	/internet-service-providers-google-analytics-advanced-segment/	721	94.59%	682	77.25%
8. (not provided)	/adding-custom-post-types-to-generator-wordpress-framework/	676	80.03%	541	80.33%
9. (not provided)	/google-analytics-101-presentation/	415	81.20%	337	76.14%
10. (not provided)	/google-plus-search-authorship/	390	85.38%	333	80.51%

Figure 7. Use of landing pages as a secondary dimension

As a solution to this problem, Sauer (2014) proposes to concentrate on landing pages instead of keywords. This could be done by choosing the “landing page” as a secondary dimension in the organic keyword report. Figure 7 illustrates the method of using landing pages as a secondary dimension. By identifying the pages that are driving the most of organic traffic to the website, it is possible to make an assumption that those pages are ranking high in search engine results page.

Future development of SEO-friendly algorithm of content publishing

During the SEO campaign implementation, the following system of content publishing was created. In the future research, it could be interesting to develop it in more details.

1. Define the goals for the website (= how it will bring money to the business)
2. Keeping in mind the first point, define what is needed to achieve as an outcome of the SEO campaign
3. Define the key performance indicators and define the conversions according to the desired results
4. Define the baseline (what is a situation at the moment)
5. Design and implement SEO campaign
6. Measure the success of SEO campaign according to defined metrics and

conversions

7. Get the insights on what is working and what is not and what could be improved and how
8. Start from the point 5

5 CONCLUSION

The topic of this thesis concerns one of the most widely-spread digital marketing practices – search engine optimization. SEO is aligned well with the principles of learning by practicing. Search engines do not disclose their ranking factors and at the same time they are constantly changing them. Therefore, it is in every case a matter of trying different on-page and off-page optimization techniques and identifying what is working and what is not for the particular website in the current situation. Thus, the ability to set the right SEO goals, to define the key performance indicators and to effectively measure the results of the campaign is becoming extremely important.

According to the research problem, the focus of this study is on profound understanding of search engine optimization metrics and describing how SEO performance could be best measured. The aim of this thesis was to study search engine optimization planning and find out how to measure the effectiveness of SEO campaigns for content-based websites.

Action research was selected as a method for this study. As a part of the research process, a SEO campaign for one website of Media company X was planned, implemented and analyzed by the author of this thesis.

In the beginning of the study, search engine optimization and its techniques were studied as well as the role of SEO as a part of company's marketing mix. Suitable for content-based website on-page and off-page optimization techniques were found and described. Due to the importance of goals setting in SEO planning process, SMART analysis was implemented to found out the key performance indicators. In the particular case they were the defined increase in organic traffic and grow of the subscription base. Analytical data was collected with Google Analytics during the period of 6 months. In the end of the reporting period, results were analyzed and the scheme of measuring the success of SEO campaign for content-based websites was created. The relation between SEO KPI's and the goals of website as well with the

overall business goals were clearly shown. It is proposed that by aligning the SEO practices with the marketing and business goals it is possible to successfully measure the results of SEO and thus take maximum advantage out of SEO. As a main suggestion for the future study, the author of the thesis proposes to calculate the return on investment in monetary value. Moreover, it would be interesting to study and implement more sophisticated SEO and web analytics techniques, e.g. A/B testing for deeper insights.

SOURCES

Agate, J. 2014, 'The New Link Building Survey 2014 - Results', Moz, 16 July, viewed 21 September 2015, < <https://moz.com/blog/link-building-survey-2014-results>>.

Clark, B. 2016, 'How to create compelling content that ranks well in search engines', Scribecontent, viewed 10 June 2015, <<http://scribecontent.com/downloads/How-to-Create-Compelling-Content.pdf>>.

Clay, B., Esparza, S. 2009, 'Building an SEO friendly site, John Wiley & Sons', Hoboken, NJ.

Clifton, B. 2012, *Advanced Web Metrics with Google Analytics*, 3rd edition, John Wiley & Sons, Indianapolis.

Cutts, M., Ohye, M. 2007, 'Information about buying and selling links that pass PageRank', googlewebmastercentral, viewed 15 November, <<http://googlewebmastercentral.blogspot.fi/2007/12/information-about-buying-and-selling.html>>.

Dell, S. 2013, *Good Ideas Marketing*, TwoCents Group, Queensland.

DeMers, J. 2012, 'Your Guide to Social Signals for SEO', Moz, 6 November, viewed 15 November 2015, <<https://moz.com/blog/your-guide-to-social-signals-for-seo>>.

Dover, D., Daffor, E. 2011, *Search engine optimization Secrets*, Wiley Publishing, Indianapolis.

Dominici, G. 2009, 'From Marketing Mix to E-Marketing Mix: A Literature Overview and Classification', *International Journal of Business and Management*, vol. 4, no. 10, pp. 17-24.

Duffy, H. 2010, 'Why Search Engine Optimization Matters', *CPA Technology Advisor*, vol. 20, no. 7, pp. 34.

Elmansy, R. 2014, *Teach yourself visually. Search Engine Optimization*, John Wiley & Sons, Indianapolis.

Enge, E., Spencer S., Stricchiola, J., Fishkin, R. 2012, *The Art of SEO: Mastering Search Engine Optimization*, 2nd edition, O'Reilly Media, Sebastopol, CA.

Evans, M. 2007, 'Analyzing Google rankings through search engine optimization data', *Internet Research Journal*, Vol. 17 No. 1, pp. 21-37.

Fishkin, R. 2016, *The beginner's Guide to SEO*, Moz, viewed at 17 March 2014, <<http://d2eeipcrd6.cloudfront.net/guides/Moz-The-Beginners-Guide-To-SEO.pdf>>.

Jobber, D., Ellis-Chadwick, F. 2013, *Principles and Practice of Marketing*, 7th edition, McGraw-Hill Education, Berkshire.

Garner, R. 2008, 'Who Invented The Terms SEO, SEM, and SEA', *MediaPost*, viewed 16 January 2015, <<http://www.mediapost.com/publications/article/92287/who-invented-the-terms-seo-sem-and-sea.html>>

Carson, D., Gilmore, A., Perry, C., Gronhaug, K. 2005, *Qualitative Marketing Research*, SAGE Publications Ltd, London.

Goldkuhl, G. 2013, 'Action research vs. design research: using practice research as a lens for comparison and integration', viewed 14 march 2015, <<http://www.vits.org/adwi2013/GGoldkuhl-ADWI2013.pdf>>.

Iivari, J., Venable, J. 2009, 'Action research and design science research - Seemingly similar but decisively dissimilar', *ECIS 2009 Proceedings*, 1 January, viewed 2 February 2015, <<http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1025&context=ecis2009>>.

Juslén, J. 2011, *Nettimarkkinoinnin karttakirja*, Suomen Yrittäjien Sypoint Oy, Helsinki.

Kananen, J. 2014, *Verkkotutkimus opinnäytetyönä*, Suomen Yliopistopaino Oy – Juvenes Print, Tampere.

Kaushik, A. 2010, *Web Analytics 2.0. The Art of Online Accountability & Science of Customer Centricity*, Wiley Publishing, Indianapolis.

Lawlor, K., Hornyak, M. 2012, 'Smart Goals: How The Application Of Smart Goals Can Contribute To Achievement Of Student Learning Outcome', *Developments in Business Simulation and Experiential Learning*, vol. 39, pp. 259-267.

Ledford, J. 2009, *Search Engine Optimization Bible*, 2nd edition, Wiley Publishing, Indianapolis.

Malaga, R. 2007, 'The Value of Search Engine Optimization: An Action Research Project at a New E-Commerce Site', *Journal of Electronic Commerce in Organizations*, vol. 5, no. 3, pp. 68-82.

Maxwell, J. 2010, 'Using Numbers in Qualitative Research', *Qualitative Inquiry*, vol. 16, no. 6, viewed 16 November 2015, <<http://qix.sagepub.com/content/16/6/475.full.pdf>>.

Moogan, P. 2016, 'The beginner's guide to link building', Moz, <<https://moz.com/beginners-guide-to-link-building>>.

Park, C. 2009, *Back to Basics: Direct, referral or organic - definitions straight from the source*, Google Analytics Blogspot, viewed 16 November 2015, <<http://analytics.blogspot.fi/2009/08/back-to-basics-direct-referral-or.html>>.

Purtell, M. 2014, 'In 2014, How Important is an H1 Tag for SEO?', *Search Engine Journal*, viewed 10 September 2015, <<http://www.searchenginejournal.com/in-2014-how-important-is-an-h1-tag-for-seo/>>.

Rappa, M. 2010, 'Business models on the web', *digitalenterprise*, viewed 10 September 2015, <<http://digitalenterprise.org/models/models.html>>.

Ryan, D. Jones, C. 2009, *Understanding Digital Marketing*, Kogan Page Limited, London.

Saleh, K., Shukairy, A. 2011, *Conversion Optimization*, O'Reilly Media, Sebastopol.

Sauer, J. 2014, '(Provided): 10 Ways to Prove SEO Value in Google Analytics', Moz, 25 February, viewed 1 December 2015, <<https://moz.com/blog/proving-seo-value-in-google-analytics>>.

Seale, C. 1999, *The Quality of Qualitative Research*, SAGE Publications Ltd, London.

Sebald, B. 2013, 'Link Building Through Outreach and Content Refreshing', Search Engine Journal, 2 October, viewed 25 September, <
<http://www.searchenginejournal.com/link-building-outreach-content-refreshing/66803/>>.

Slegg, J. 2014, 'Matt Cutts: Facebook, Twitter Social Signals Not Part of Google Search Ranking Algorithms', Search Engine Watch, 28 January, viewed 15 November 2015, <
<http://searchenginewatch.com/sew/news/2325343/matt-cutts-facebook-twitter-social-signals-not-part-of-google-search-ranking-algorithms>>.

Solis, A. 2012, 'Setting Smarter, Not Harder SEO goals', *International SEO consultant*, <<http://www.aleydasolis.com/en/search-engine-optimization/smart-seo-goals/>>.

Southern, M. 2015, 'Google Search Console Indexed Pages Problem Confirmed', Search Engine Journal, 20 August, viewed 15 November 2015, <
<http://www.searchenginejournal.com/google-search-console-indexed-pages-problem-plus-workaround/139478/>>.

Sullivan, D. 2013, 'The Evolution of Search', *Moz*, 28 June, viewed 9 May 2015, <
<https://moz.com/blog/the-evolution-of-search>>.

Sullivan, D. 2010, 'What Social Signals Do Google & Bing Really Count?', Search Engine Land, 1 December, viewed 15 November 2015, <
<http://searchengineland.com/what-social-signals-do-google-bing-really-count-55389>>.

Thorpe, R. & Holt, R. 2008, *The Sage Dictionary of Qualitative Management Research*, SAGE Publications Ltd, London.

Zadro, D. 2015, 'How Social Signals Affect Your SEO', 6 September, viewed 15 November 2015, <
<http://www.searchenginejournal.com/social-signals-affect-seo/135956/>>.

List of on-page and off-page optimization strategies implemented during the study.

On-page optimization strategies

1. Content plan

Content plan is created according to the list of keywords.

Although the content is editorial, it is answering the users' questions and exceeding their expectations. Keywords should be wisely used in the title of the section as well in the appropriate places in the body text.

Viral content could bring to the website lots of visitors and media attention.

However, the greatest difficulty lies in the ability to create interesting, targeted and worth sharing content on a constant basis, and thus give visitors a proof they need to come back to the website again.

Similar or supplementary articles should be linked together using the anchor text of the title of the page.

2. Title tag & Meta description

Title tag should be used for every piece of content on the website. Its length is about 65-75 characters and it should contain keywords (better use them close to the beginning of title). It is also good to remember that title tag is also seen when a page is shared in social media.

Meta description is written manually and in an attractive way as it is shown in the search engine results pages. Keywords should be included in meta description.

3. Indexing

Search engine could be "informed" that a new content is published by "asking" search engine crawler to visit the recently added webpage (this could be done via Webmaster tool). This will speed up the appearance of a new page in search. Publishing link to a new webpage in social media also speeds up the indexing process.

In order to identify the amount of pages that are already indexed in the search engine, it is possible to try "site: example.com" search.

4. Images & Videos

Assigning images "alt attributes" in HTML.

Search engine robots could recognize only text content (Juslén, p. 157). Therefore, if a webpage is filled with pictures, it is necessary to provide it with textual

description. Moreover, keywords should be used in image names and alt attributes. Videos or audio content should be provided with short text description.

Off-page optimization strategies

1. Link building

The main objective of link building is not only in acquiring as many external links as possible but also to build relationships with website owners. Nowadays practically every website owner understands the power of linkage, and thus it is very difficult to get a link for “nothing”, especially if your website is a part of Media Company. In most cases, website owners would accept only link exchange or they are linking only to their partners, and media websites usually have a lot of corporate restrictions about exchanging links with other parties.

During the research, it was identified that the easiest way of gaining links is to start a collaboration with other websites, e.g. producing a piece of content together.

2. Social media

Communities and profiles in different social media (Facebook, Twitter, Instagram) were created to share and promote the content there.

3. Video content

Video content with links to the website was created and loaded on Youtube.